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MESOSIGNUM ANTARCTICUM, NEW SPECIES, THE FIRST RECORD OF THE GENUS FROM THE DEEP SEA SOUTH OF THE ANTARCTIC CONVERGENCE (ISOPODA: JANIRIOIDEA)

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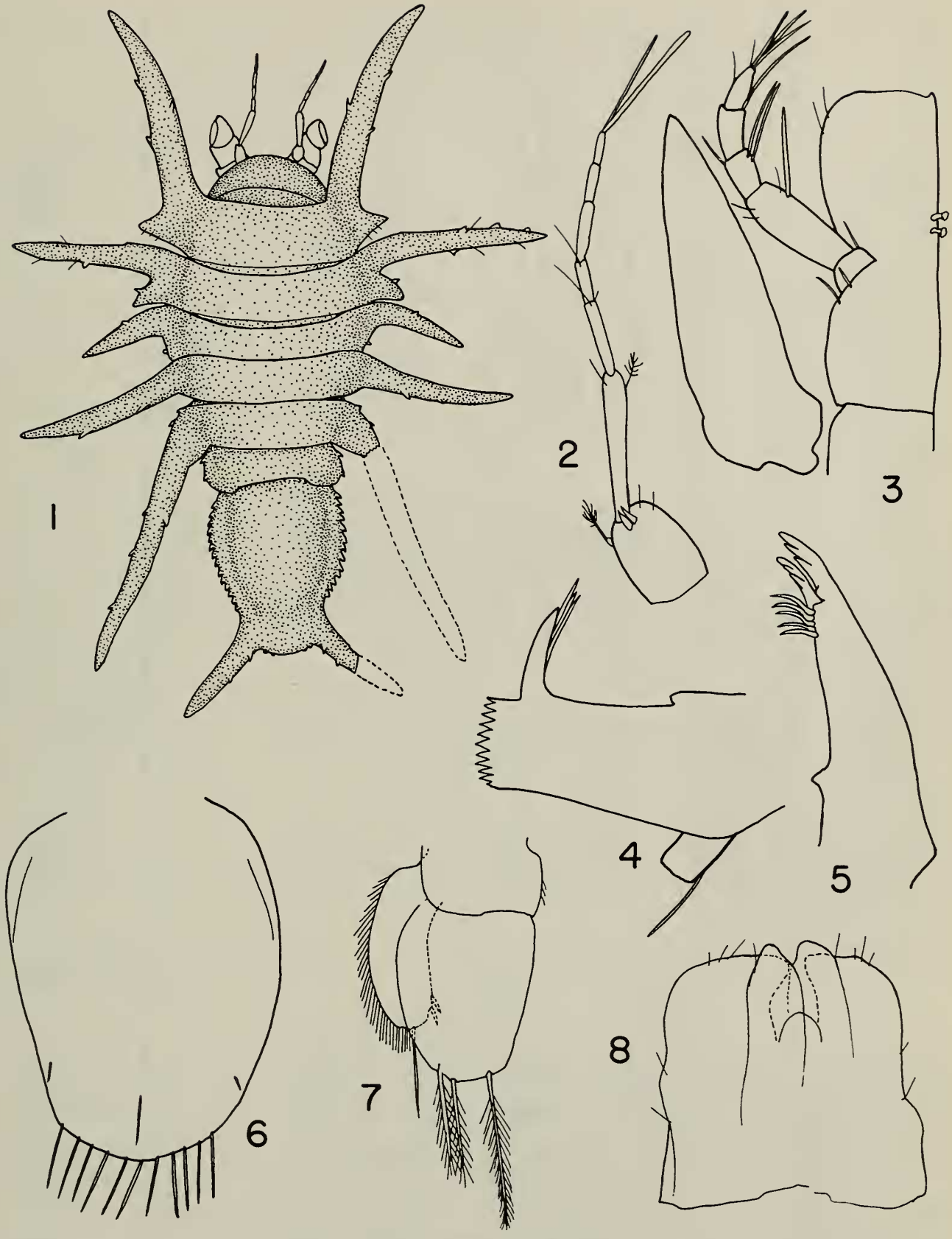
Abstract.—A single female specimen of a new species of *Mesosignum* Menzies, 1962—*M. antarcticum*—was obtained from the deep sea south of the Antarctic Convergence in the Pacific Quadrant of the Antarctic Ocean. The species is described and illustrated and its place in the genus is discussed.

A single female specimen of *Mesosignum* Menzies (1962) was collected at a R/V *Eltanin* station in the deep part of the Pacific Quadrant of the Antarctic Ocean. It was the only specimen of the genus discovered from among thousands of specimens from more than 820 stations examined from the whole Antarctic region. It is the first of the genus to be taken far from the Pacific and Caribbean locations where other species of the genus have been recorded. Menzies (1962) based the genus on *M. kohleri,* a species which he described along with one other from the Caribbean Sea. Birstein (1963a) described two species from the north Pacific and later (1963b) one from the Bougainville Trench of the Pacific. Menzies and Frankenberg (1968) described six species from the central western Pacific and compared them to the previously described species. Menzies and George (1972) redescribed one of the Menzies and Frankenberg species and described a new one from the Peru-Chile Trench. The total species in the genus including the new one described here is 13. Their length, sex or sexes known, depth and distribution are included in Table 1. Most species were collected in the deep sea within 30°N and 30°S of the equator. The depth range for the species of *Mesosignum* is from 1016–7954 m with most species being from below 3000 m. The species are blind and without pigment as are most other Janirioidea from the deep sea.

Mesosignum antarcticum, new species
Figs. 1–12

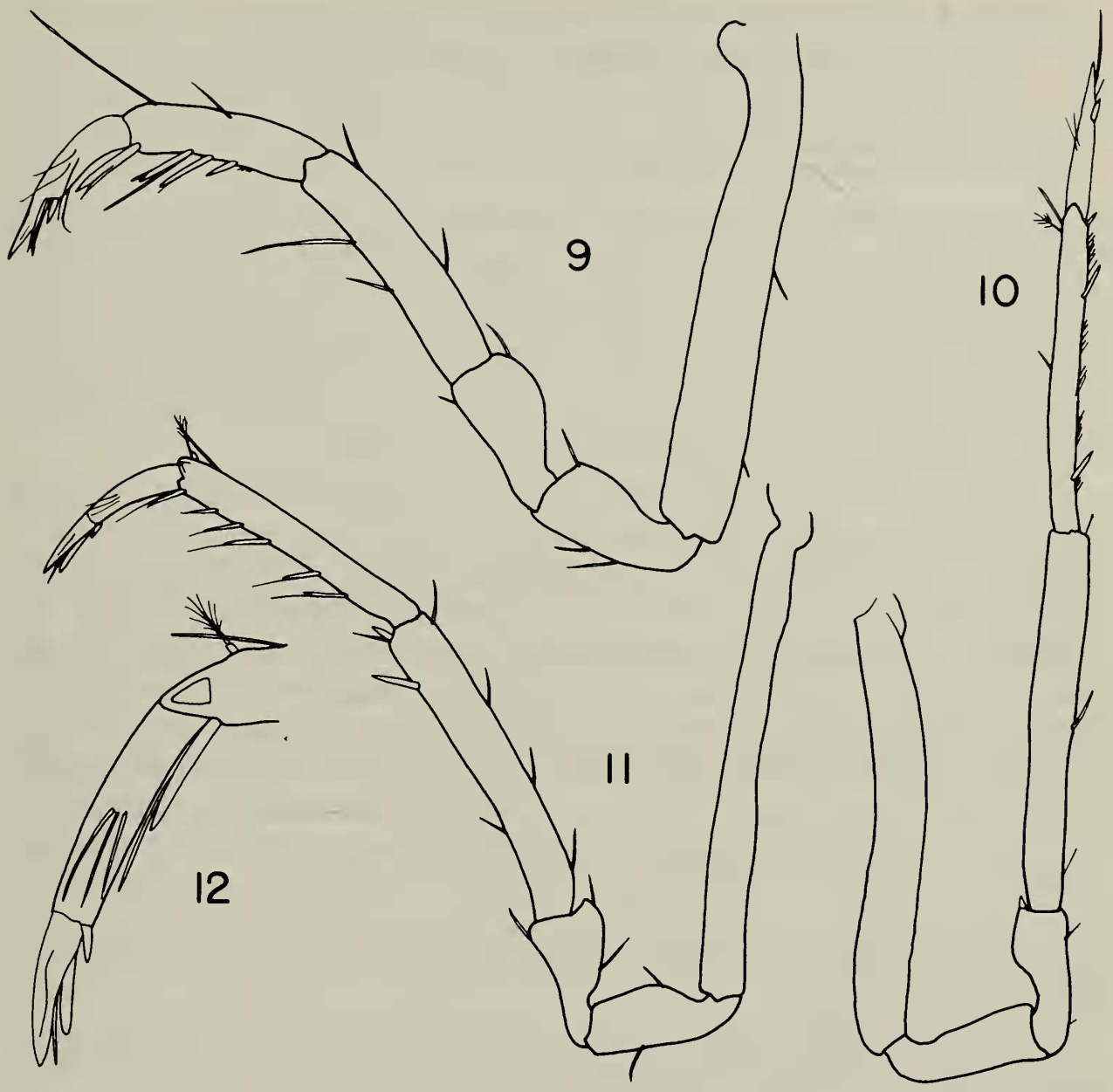
Description.—Cephalon and peraeonal segment I folded so most of dorsum of cephalon not visible in dorsal view. Dorsum of cephalon and pe-



Figs. 1–8. *Mesosignum antarcticum*: **1,** Dorsal view holotype female 2.5 mm long; **2,** Antenna 1; 2, Maxilliped; **4,** Mandible (damaged); **5,** Mandible; **6,** Operculate pleopod; **7,** Pleopod 3; **8,** Hypopharynx.

Table 1. *Mesosignum* species.

	Maximum length	Sex or sexes known	Depth	Location
Type A—No large projections from pleotelson				
admiratum Menzies and Frankenberg, 1968	3.2	♂♀	1016–1369	Pacific off Costa Rica
brevispinis Birstein, 1963a	1.6	♀	5670–5680	Southeast of Kurile Islands
elegantulum Birstein, 1963a	1.9	♀	4000–4150	South of Osaka, Japan
kohleri Menzies, 1962 (type-species)	2.5	♂♀	2868–4071	Colombian Plain, Caribbean Sea
magnadens Menzies and Frankenberg, 1968	2.6	♀	3378	Windward Passage, Caribbean Sea
multidens Menzies and Frankenberg, 1968	3.0	♂♀	3372–6354	Peru-Chile Trench
Type B—Long projections from pleotelson				
ansatum Menzies and Frankenberg, 1968	2.1	♀	3777–3950	Pacific off Nicaragua
antarcticum Schultz, 1979	2.5	♀	4039	Pacific Quadrant, Antarctic Ocean
asperum Menzies and Frankenberg, 1968	1.6	♂	3718	Pacific off Costa Rica
macrum Menzies and Frankenberg, 1968	2.8	♀	3254–3260	Pacific off Costa Rica
truncatum Menzies and George, 1972	2.3	♂♀	4823–4925	Peru-Chile Trench
usheri Menzies, 1962	2.1	♂♀	1016–4065	Caribbean Sea—northwest of Cartegena, Colombia West Coast South America to Patagonia
vitjazi Birstein, 1963b	3.0	♂	6920–7954	Pacific, New Britain Trench



Figs. 9–12. *Mesosignum antarcticum*: **9–11**, Peraeopods I, II, and VII respectively; **12**, Detail dactylus peraeopod II.

raeonal segment I without dorsal or lateral spines. Dorsum of peraeonal segments II and III with elongate anterolateral corners and short pointed posterolateral corners. Peraeonal segment IV with elongate anterolateral corners of about half length of extensions on peraeonal segments III and V; without posterolateral extensions. Peraeonal segment VI with very long posteriorly directed lateral extensions; extensions longest of all peraeonal extensions and envelop most of length of pleotelson. Peraeonal segment VII about as wide as peraeonal segment I and without lateral extensions. Pleotelson longer than broad with serrated, convex lateral borders; posterolateral extensions of pleotelson slightly longer than anterolateral extensions on segment IV. Posterior margin of pleotelson convex.

Antenna 1 with 7 segments; apical one with single aesthetac and one long seta. (Mouth parts damaged.) Mandible with lacinia mobilis; 4 setae in setal row. Molar process thin and elongate with long apical setae. Mandibular palps broken; basal palp article present on one mandible. Maxilliped with all palp articles narrow; 2 coupling hooks; endite with plain (probably damaged) sensory edge. All peraeopods long and thin with I the least and VII the most elongate. All dactyli with elongate unguis as major claw. Operculate pleopod ovate with 11 setae on convex posterior margin. Uropods short, not entending beyond posterior margin (dorsal view.)

Type-locality.—South of the Antarctic Convergence in the Pacific Quadrant of the Antarctic Ocean; *Eltanin* station 58-921; 5′ Blake Trawl; 68°51′–68°56′S; 114°08′–114°10′W; 4,038 m; 16 January 1964.

Derivation of name.—The name is the Latin neuter adjective meaning antarctic and it modifies the neuter *Mesosignum.*

Disposition of type.—The type-specimen has been deposited in the National Museum of Natural History (holotype female USNM 171447).

Affinities.—The new species has long posterolateral extensions on the pleotelson and is thus in the Type B group of Menzies and Frankenberg (1968). Only *M. ansatum* Menzies and Frankenberg lacks short spines on the dorsum which is comparable to the very few short spines present on the dorsum of the new species. The posterolateral extensions on segments II and III are comparatively much shorter on *M. antarcticum.* On peraeonal segments IV, V and VI posterolateral extensions are not even suggested as they are in *M. ansatum.* The new species can be told from all others in the genus because it has only a few small spines on the dorsum and on the peraeonal extensions.

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